DOCUMENT RESUME

ED 239 408 EA 016 375

AUTHOR	Eberts, Randall W.
TITLE	Profile of Teacher Turnover in New York State School Districts: 1972-1977. Final Report--Paper I.
INSTITUTION	Oregon Univ., Eugene. Center for Educational Policy and Management.
SPONS AGENCY	National Inst. of Education (ED), Washington, DC.
PUB DATE	Dec 82
NOTE	34p.; For papers II and III, see EA 016 376-377.
PUB TYPE	Reports - Research/Technical (143) -- Statistical Data (110)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Educational Administration; *Employment Patterns; Enrollment Trends; *Faculty Mobility; Profiles; Public School Teachers; Reduction in Force; School Districts; *Teacher Behavior; Teacher Characteristics; Teacher Dismissal; Teacher Distribution; *Teacher Transfer; Teaching (Occupation)
IDENTIFIERS	*New York

ABSTRACT

Offered as a foundation for subsequent analysis, this report presents data on the frequency of teacher turnover in New York State districts from 1972 to 1977 and discusses the methods used for calculations from State Department of Education records. Data drawn from a 1-in-20 random sample totalling 13,000 teachers are analyzed in order to investigate three types of turnover: quits, or transfer of teachers between districts; transfers of teachers between schools in the same district; and changes in teacher assignment. Figures cited in an introductory literature review are used to check the validity of New York turnover rates. The following section provides turnover rates for the time periods 1972-76 and 1976-77, analyzed in terms of teaching experience, age of teachers, and changes in district enrollment. The final section concludes that such factors as declining enrollment and seniority rules may determine teacher mobility and thus district staff composition, and that the turnover rates for New York do not differ significantly from teacher behavior in other states. Information on constructing the data set and on calculations of transfers and quits is appended. (MJL)

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ED239408

Profile of Teacher Turnover in New York State School Districts: 1972-1977

FINAL REPORT - Paper I

by

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December 1982

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The preparation of this final report for the Collective Bargaining Project was made possible through an Institutional Grant awarded by the National Institute of Education to the Center for Educational Policy and Management. The opinions expressed in this report do not necessarily reflect the positions or policies of the NIE or the U.S. Department of Education.

EA 016 375

Table of Contents

	Page No.
Acknowledgements	i
I. Purpose	1
II. Past Studies of Teacher Turnover	3
III. Teacher Turnover in the State of New York: 1972-1977	5
A. Teacher Turnover and Age	9
B. Teacher Turnover and Enrollment Trends	14
C. Teacher Turnover and Teacher Experience	18
IV. Conclusion	23
Footnotes	24
References	25
Appendix A: Constructing the Data Set	26
Appendix B: Calculations of Transfers and Quits	28

Acknowledgments

The author is indebted to Leonard Powell of the Bureau of Educational Data Systems of the New York State Education Department for providing the data used in this study and to Patty Beeson and David Hedrick for their computational assistance.

Profile of Teacher Turnover

in

New York State School Districts:

1972-1977

I. Purpose

The mobility of teachers to, from, and within school districts takes place for a variety of personal, administrative, and financial reasons. Virtually every district in the country experiences staff turnover in one form of another. The implication of teacher turnover, however, is markedly different depending upon the enrollment and budgetary climate of the individual districts. For example, when the baby boom of the 1950s began to pass through public schools, the major issue was the shortage of teachers. Mobility of teachers between districts meant, at that time, a greater need to recruit new teachers. Mobility within districts meant that teachers had an opportunity to choose an assignment that best suited their preferences. As the last of the baby boom passed through the public school system in the late 60s and early 70s, teacher turnover meant something entirely different. With enrollments declining, demand for teachers fell and a surplus of teachers developed. In this situation the number of teachers who left a district determined the number who could be hired. Thus, the composition of the teaching force was determined by the extent of teacher turnover.

Accompanying the trend of declining enrollments has been the rapid increase in the number of teachers covered by collective bargaining agreements. By the mid-1970s, over 60 percent of the nation's public school teachers were covered by agreements negotiated by a recognized bargaining unit. In New York, over 90 percent of the teachers are represented by a recognized bargaining unit.[1] By negotiating provisions which cover a

wide range of issues, teachers as a collective unit have increasingly become partners with administrators in deciding school policy. For instance, in the state of New York in 1976, over 40 percent of the districts had contract provisions that addressed the issue of reduction in force.[2] A national survey showed that over 40 percent of the teachers included in the sample were covered by provisions which allowed them to participate in the assignment of teachers and budget matters.[3] With declining school enrollments and concurrent reductions in funding, the increased level of teacher involvement in administering school personnel policy may have a significant effect on the way in which administrators deal with the issues of staff reduction.

This paper provides a description of teacher mobility in districts in the state of New York. Three types of turnover are examined: (1) the transfer of teachers between districts (quits); (2) the transfer of teachers between schools in the same district (transfers); and (3) the change in teacher assignments.

To analyze teacher mobility in the state of New York, a census of regular classroom teachers was obtained from the State Department of Education for 1972, 1976, and 1977. By following the movement of teachers (between districts, schools, and assignments) over these three years, it is possible to designate which teachers made the various moves.

This paper is organized in three sections. The first section briefly outlines the findings of past studies of teacher turnover. These figures are used to mark the change in turnover trends throughout the 60s and 70s as well as to check the validity of the turnover rates for New York State. The second section describes the turnover rates for New York State school districts with respect to experience, age, and change in enrollments. The third section contains a brief summary and conclusions. Appendices are

included to describe the way in which the data set was constructed.

II. Past Studies of Teacher Turnover

In the past 20 years, a number of studies have emerged on teacher turnover. Some of the more widely cited studies have been based on seven databases: (1) a survey conducted by the U.S. Office of Education; (2) periodic surveys conducted by the National Education Association; (3) work by the Rand Corporation on the one percent sample of workers covered by Social Security in primary and secondary education; (4) an in-depth study of the San Diego School District also conducted by Rand; (5) an in-depth study of an anonymous school district by Murnane; (6) a study of teacher turnover in Michigan by Greenberg and McCall; and (7) a study by Baugh and Stone on termination of teachers in Oregon school districts.

(1) The Office of Education studies were based on a survey of a stratified sample of over 2000 school districts in 1957 and 1959. This study found the rate of termination (or quits) to be about eight percent between the fall of 1959 and the fall of 1960. The rate of transfers was around five percent for the same period. The study also showed that the termination and transfer rates were not greatly related to economic factors such as salaries and teacher/student ratios. They noted that the rate of terminations was greater for small districts presumably because internal transfers are not as available in the smaller districts.

(2) The NEA studies were based on questionnaires mailed to a stratified sample of 2000 teachers periodically from 1955 to 1965. The quit rate in these surveys varied from seven percent to eleven percent and the transfer rates centered on six percent. The survey asked teachers why they decided to terminate. Over 70 percent of the teachers sampled cited personal reasons for their decisions to quit while the remainder indicated they quit

for economic reasons.

(3) A one percent sample of wage earners in primary and secondary education covered by Social Security was constructed by the Rand Corporation for the years 1962-66. Seven to eight percent of the teachers in this sample were shown to terminate per year. It was also found that demographic factors were important in explaining terminations.

(4) The Rand Corporation also conducted a study of teacher turnover in the San Diego School District between 1970 and 1972. In return for sacrificing the generality of their findings, this study was able to take a close look at the movements of teachers and the reasons for these changes. The analysis recorded far fewer teachers terminating (a five percent rate), but confirmed earlier findings that personal characteristics of the teacher, rather than economic conditions, tend to be better indicators of terminations.

(5) Murnane attempted to replicate the findings for San Diego by conducting an extensive survey of another large school district from 1965 to 1974. He found that the rate of termination to be around 11 percent throughout the period. Transfer rates were five percent in 1965-67 and increased to seven percent in 1971-74.

(6) The Rand Corporation also conducted a study of teacher turnover in Michigan schools. Terminations averaged close to 10 percent a year from 1968 to 1971. Personal characteristics--females under 30, and male and females over 53--were found to be important.

(7) A recent study by Baugh and Stone of Oregon schools during the 1970s challenges the accepted thinking that economic factors are unimportant in determining teacher quits. They find, instead, that the difference in wages between the district the teachers left and the district the teachers entered was significant. Furthermore, the wage difference between the

education sector and other sectors was also significant for teachers who left teaching.

Table 1 provides a comparison of the various rates of terminations and transfers obtained by the five studies.

III. Teacher Turnover in the State of New York: 1972-1977

This project considers teacher turnover in public school districts in the state of New York for two separate time periods: 1972-1976 and 1976-77. During this period, public education in New York was experiencing an overall decline in enrollments. This was not the case, however, in all school districts. Therefore, by grouping school districts by enrollment trends, it is possible to record the effect of enrollment changes on teacher turnover. Furthermore, using two separate time periods affords a comparison of turnovers over a relatively long period of time.

The percentage of teachers who have changed districts (quits), changed schools (transfers), and remained in the same school and district (holdovers) are shown in Tables 2 and 3. It should be noted that although mobility between districts is referred to as "quits" it is not possible to determine whether the individual left the district voluntarily or was fired. Comparisons of the turnover rates between the two time periods are made somewhat difficult by the difference in the lengths of the two intervals. However, a fairly accurate comparison can be made by dividing the transfer and separation rates in the first time period by three. Using this method, the annual transfer rate in the first time period is around three percent and the annual separation rate is nine percent. This compares favorably with the annual transfer rate of four percent in the second period but the separation rate is somewhat larger than the six percent found in the second period. The results for New York schools fit within the range of annual rates obtained by

Table 1

Comparison of Rates of Teacher Quits and Transfers from Selected Studies

	Office[1] of Educ	NEA[2]					Soc Sec[3] Sample	San Diego[4]		Murnane[5]		
	1957-59	1955	57	59	64	65	1962-66	1965-67	71-74	1965-67	68-70	1971-74
Quits	8%	7%	11%	8%	9%	7%	10%	4.2%	7.5%	3.6%	12.5%	11.8%
Transfers	5%	6%	6%	5%	7%	6%		5%	7%	5%	6.2%	6.9%

Notes: (1) see Lindenfeld (1963)
(2) see NEA (1957, 1972)
(3) see Carroll
(4) see Greenberg and McCall (1973)
(5) see Murnane (1981)

Table 2
Percentage of Teachers Who Heldover, Transferred, or Quit Between 1972-1976,
By Sex and Experience, New York Public Schools

Holdovers (65.2%)

Experience	1	2	3	4	Total (%)
Male	5	16	17	62	5373 (46%)
Female	6	20	17	56	6366 (54%)
Total	698 (6%)	2132 (18%)	1974 (17%)	6935 (59%)	11739

Transfers (8.5%)

Experience	1	2	3	4	Total (%)
Male	7	22	21	50	631 (42%)
Female	11	26	18	45	869 (58%)
Total	142 (9%)	366 (24%)	288 (19%)	706 (47%)	1500

Quits (26.3%)

Experience	1	2	3	4	Total (%)
Male	18	27	14	41	1174 (25%)
Female	15	28	15	41	3434 (75%)
Total	736 (16%)	1288 (28%)	706 (15%)	1878 (41%)	4608

Note: Experience Coding:
1 = 1 yr. experience in district in 1972
2 = 2 or 3 yrs. experience in district in 1972
3 = 4 or 5 yrs. experience in district in 1972
4 = 6 or more yrs. experience in district in 1972

Row Percentages Entered in Each Cell

Table 3
Percentage of Teachers Who Heldover, Transferred, Or Quit Between 1976-77, By Sex and Experience, New York Public Schools

Holdovers (90%)

Experience	1	2	3	4	Total (%)
Male	0	1	6	93	5690 (54%)
Female	0	1	8	91	6803 (46%)
Total	26 (0%)	93 (17%)	920 (7%)	11454 (92%)	12493

Transfers (4%)

Experience	1	2	3	4	Total (%)
Male	0	2	9	89	243 (45%)
Female	0	1	15	84	322 (55%)
Total	0 (0%)	7 (17%)	67 (12%)	471 (86%)	545

Quits (6%)

Experience	1	2	3	4	Total (%)
Male	0	1	6	63	254 (27%)
Female	1	3	14	82	673 (73%)
Total	2 (0%)	19 (2%)	113 (12%)	789 (85%)	927

Note: Experience coded same as in Table 1 with 1976 used as base year instead of 1972.

Entries in each Cell are Row Percentages

previous studies.

A. Teacher Turnover and Age

The general consensus of the studies previously cited is that teacher turnover is determined by personal reasons more than economic reasons. This explanation of teacher mobility can be explored (very casually) by considering the turnover rates with respect to the age and experience of the teacher, and the enrollment trend of the district the teacher was employed in at the beginning of the period.

First consider turnover rates with respect to age. Table 4 shows the percentage of teachers who holdover, transfer, and quit by three age groups between 1972 and 1976. Conventional wisdom would suggest that teachers quit because they are close to or at retirement age or because they are at the child-bearing age. This was supported by the analysis of the Social Security file during the 1960's (see Keeler 1973, p. 7). For New York school districts, 50 percent of the teachers who quit were less than 28 years of age. At the other end of the age scale, nine percent of the teachers who quit were 61 years of age or older. The middle age group showed an 41 percent quit rate. Results for 1976-77 in Table 5 show a different distribution, primarily due to the fact that there was only a one year lag between the time the age of the teacher was recorded and the time the quit was recorded.

Merely reporting the distribution among age groups of teachers who quit is misleading, however. For those teachers who quit, the percentage found in each age category depends upon the percentage of all teachers in each category. For example, we found that 50 percent of the teachers who quit were less than 28 years of age. If age makes no difference in the propensity of teachers to quit, we would expect this percentage to equal the

Table 4
Percentage of Holdovers, Transfers, and Separations by Age, 1972-76

Holdover (65.2%)

Age	1	2	3	
Male	30	70	0	5678 (46%)
Female	32	67	1	6805 (54%)
Total	3859 (31%)	8546 (68%)	78 (1%)	12483 (100%)

Transfers (8.5%)

Age	1		2		3		
Male	41 33	1.25	58 66	89	0 0	0	680 (42%)
Female	41 39	1.04	59 57	1.04	0 1.16	0	939 (58%)
All	41 37	1.11	59 60	.98	0 2.72	0	1619 (100%)
Total	664 (41%)		952 (59%)		3 (0%)		

Table 4 (Continued)

Quits (26.3%)

Age	1		2		3		
Male	45 33	1.36	50 66	.76	6 1	4.92	1313 (26%)
Female	52 39	1.33	38 57	.67	10 4	2.61	3707 (74%)
All	50 37	1.35	41 60	.68	9 2.7	3.31	5020 (100%)
Total	2515 (50%)		2066 (41%)		439 (9%)		
Columns Total	7038 (37%)		11564 (60%)		520 (3%)		

Note: Age = 1 if age less than or equal to 28 years
Age = 2 if age is between 28 and 61 years
Age = 3 if age is greater than or equal to 61 years

Entries in the cells for holdovers are row percentages.
Entries in the cells for transfers and quits are:

a. upper left - the percentage of teachers who transferred (or quit) who are in that particular age category.

b. lower left - the percentage of all teachers who are in that particular age category.

c. right - the ratio of (a) to (b).

Table 5
Percentage of Holdovers, Transfers, and Separations by Age, 1976-77

Holdovers (90%)

Age	1	2	3	
Male	9	90	1	5856 (45%)
Female	14	83	3	6997 (55%)
	1458 (11%)	11110 (86%)	285 (2%	12853 (100%)

Transfers (4%)

Age	1	2	3	
Male	14	85	1	251 (44%)
Female	20	78	2	315 (56%)
	100 (18%)	459 (81%)	7 (1%)	566 (100%)

Separations (6%)

Age	1	2	3	
Male	9	77	14	260 (27%)
Female	21	57	15	695 (73%)
	220 (23%)	597 (63%)	138 (14%)	955 (100%)

Column Total	1778 (12%)	12166 (85%)	430 (3%)	14374 (100%)

Note: See Table 4 for Coding of Age

percentage of all teachers (regardless of whether they quit, transferred, or heldover) in the less-than-28 age category. This is found not to be the case. We found 37 percent of all teachers were less than 28 years of age. The actual percentage of quits in this age group is 35 percent higher than expected when the age makes no difference in determining quits. A convenient way to compare the actual percentage with the expected is to compute the ratio of the percentage of teachers who quit in each age category to the percentage of all teachers in each category. The ratios (rightmost entry in each cell) are shown in Table 4 along with the percentage of teachers who quit in each category (upper left corner of each cell) and the percentage of all teachers in each age category (lower left corner of each cell). By comparing the ratios to one, teachers in the youngest and oldest age categories are more likely to quit than teachers in the middle categories.

Grouping the teachers who quit by sex yields the same relative magnitudes of the ratio for the various age groups. In the first age group, the ratio for male and female teachers are identical. The same can be said about the second group. Only the oldest age group shows a large difference in magnitude with males far outpacing the females in quits. With the small number of teachers included in this last age group (only three percent of the total of 19,122 teachers in the sample), it is unwise to place too much weight on these results.

The effect of age on the rate of transfers is not as pronounced as it is for quits. Results show that teachers in the first age group who transferred between 1972 and 1976 were 11 percent above the sample percentage for teachers in this age bracket. The ratio in the second age group was virtually equal to one. With only three teachers recorded as transferring in the oldest age bracket, the ratio for this bracket is zero. Male and female teachers displayed only slight differences in the transfer rates. It appears

that males less-than-28 are more likely to transfer than females, but males within the middle age group are less likely to transfer.

B. Teacher Turnover and Enrollment Trends

Past studies have failed to find economic factors, other than wages, to be important in the decisions of teachers to transfer or quit. This may be due, however, either to the time period in which these studies were conducted or to regional characteristics. To explore the effect of enrollment trends on teacher turnover, districts in the state of New York were grouped according to the change in district enrollment between 1972 and 1976 for the first period and 1976 and 1977 for the second (Tables 6 and 7). The first group included districts that experienced increasing enrollments; the second group experienced slightly declining enrollments (less than an eight percent decline); and the third group had rapidly declining enrollments (eight percent or greater). If enrollment changes place pressure on administrators to fire teachers, then one would expect that separation rates would be greater for districts with larger enrollment declines. Results in Table 6 do not support this thinking, however. The ratios, computed in a manner analogous to the age categories, reveal that the quit rate is identical for all three types of enrollment changes. Only slight differences emerge when teachers are divided by sex, but the differences are not significant.

Transfer rates, on the other hand, show some variation across enrollment trends. Districts with increasing enrollments have a higher than expected transfer rate whereas districts with slightly declining enrollments have a lower than expected transfer rate. Transfer rates in rapidly declining districts have approximately the same percentage of teachers transferring as the percentage of teachers in this enrollment group. The

Table 6
Percentage of Holdovers, Transfers, and Separations by Enrollment Changes, 1972-76

Holdovers (65.2%)

Enrollment Trends	1	2	3	
Male	21	35	44	5678 (46%)
Female	23	36	41	6805 (54%)
	2761 (22%)	4467 (36%)	5255 (42%)	12483 (100%)

Transfers (8.5%)

Enrollment Trends	1		2		3		
Male	27 21	1.26	31 35	.88	41 43	.95	680 (42%)
Female	24 23	1.07	32 36	.90	44 41	1.07	939 (58%)
All	26 22	1.16	32 36	.89	42 43	.98	1619 (100%)
Total	413 (26%)		510 (32%)		696 (42%)		

Table 6 (Continued)

Quits (26.3%)

Enrollment Trends	1		2		3		
Male	19 21	.90	36 35	1.02	45 43	1.03	1313 (26%)
Female	22 23	.98	37 36	1.02	41 41	.99	3707 (74%)
All	21 22	.97	37 36	1.02	42 42	1.00	5020 (100%)
Total	1087 (22%)		1826 (36%)		2107 (42%)		
Column Totals	4261		6803		8058		19122

Note: Enrollment Trend = 1 if percentage change in enrollment (1971-1976) greater than 0.
Enrollment Trend = 2 if percentage change in enrollment (1972-1976) between 0 and -8%
Enrollment Trend = 3 if percentage change in enrollment (1972-1976) less than -8%

Entries in the cells for holdovers are row percentages.
Entries in the cells for transfer and quits are:

a. upper left - the percentage of teachers who transferred (or quit) who are in that particular group.

b. lower left - the percentage of all teachers who are in that particular group.

c. right - the ratio of (a) to (b).

Table 7
Percentage of Holdovers, Transfers, and Separations by Enrollment Changes, 1976-77

Holdovers (90%)

Enrollment Trends	1	2	3	
Male	22	35	43	5856 (46%)
Female	23	36	40	6997 (54%)
	2938 (23%)	4583 (36%)	5332 (41%)	12853 (100%)

Transfers (4%)

Enrollment Trends	1	2	3	
Male	19	30	51	251 (44%)
Female	21	27	52	315 (56%)
	116 (20%)	162 (29%)	288 (51%)	566 (100%)

Quits (6%)

Enrollment Trends	1	2	3	
Male	17	36	47	260 (27%)
Female	21	38	41	695 (73%)
	187 (20%)	356 (37%)	412 (43%)	955 (100%)

Column Totals	3241	5101	6032	14374

Note: See Table 6 for Coding of Enrollment Trends

ratios also differ by sex. Transfer rates of males in increasing enrollment districts are higher than for females. The opposite holds for rapidly declining enrollment districts. Each sex registers the same rates in slightly declining enrollment districts. If one subscribes to the human capital and institutional theories of labor turnover (see Eberts 1982), then the differences may indicate that males are better able than females to make moves which improve their job position. Females, on the other hand, are more likely than males to be bumped from a position in periods of declining enrollments. Obviously, much more rigorous analysis which holds constant other teacher characteristics must be performed before such conclusions can be drawn with any confidence. Such an analysis is attempted in a subsequent paper (see Eberts 1983).

C. Teacher Turnover and Teacher Experience

Another determinant of teacher turnover may be the seniority (as measured by experience within the district) of the teacher. Collective bargaining agreements base many personnel policy decisions upon the seniority and, in some cases, education level of teachers. One would expect, therefore, that teacher turnover may differ by within-district experience. Table 8 shows the percentage of quits and transfers broken down by various levels of experience. The first two categories of experience (1 year and 2-3 years experience) indicate in most cases a nontenured teacher. The latter two categories most likely contain tenured teachers. The differences in quit rates across experience categories conform with conventional notions of tenure. Teachers without tenure (categories 1 and 2) have a higher quit rate than teachers with tenure (categories 3 and 4). Moreover, the ratios for the first two categories are greater than one (higher than expected) and the ratios for the latter two categories are less than one. To further support

Table 8
Ratio of Percentage of Teachers Who Quit or Transferred by Experience to Percentage of Teachers in Sample in Each Experience Category, 1972-76

Transfers

Experience	1	2	3	4
Male	1.0	1.2	1.2	.86
Female	1.1	1.1	1.1	.90
All	1.2	1.1	1.1	.91

Quits

Experience	1	2	3	4
Male	2.6	1.5	.82	.71
Female	1.5	1.2	.94	.82
All	1.8	1.3	.88	.77

Note: Experience = 1 if teacher had 1 year experience in 1972.
= 2 if 2 or 3 years experience in 1972.
= 3 if 4 or 5 years experience in 1972.
= 4 if 6 or more years experience in 1972.

the expected effects of seniority, the magnitudes of the ratios decline monotonically from the category with the least experience to the one with the greatest. It appears, therefore, that teachers with greater seniority bump teachers with lesser seniority if reduction-in-force becomes necessary.

Since the enforcement of reduction-in-force procedures depend upon the enrollment trends of a district, one would expect the frequency of quits, and to some degree transfers, to vary with enrollment changes. Table 9 shows how teacher turnover differs by enrollment trends for each of the four experience categories discussed above. In the case of quits, results show that teachers are more likely to quit if they are in a district with declining enrollments. Moreover, the magnitude of the ratio is less than 1 for teachers with less than 6 years experience and increases monotonically as enrollment declines increase. Transfer rates exhibit a much less regular pattern. Teachers appear to be less likely to transfer in districts with slightly declining enrollments than teachers with the same experience in districts with increasing or rapidly declining enrollments. These patterns of transfers probably reflect the motives for turnover. In increasing enrollment districts teachers transfer in search of more desirable positions; in rapidly declining districts teachers scramble for remaining positions as the overall demand for teachers falls.

Comparing the difference in quit rates across experience levels for each of the three enrollment groups reveals a pattern similar to that found when teachers were not separated into enrollment groups. That is, teachers with greater seniority are less likely to quit. This pattern, however, is accentuated as enrollment declines. For example, the magnitude of the ratio is 1.6 for first-year teachers in increasing enrollment districts, is 1.8 for teachers in slightly declining enrollment districts, and 2.0 for teachers in rapidly enrollment districts. Second and third-year teachers exhibit similar

Table 9
Teacher Turnover by Experience Level and Enrollment Trends, 1972-76

A. Ratio of Percentage of Teachers Who Quit by Experience to Percentage of Teachers in Sample in Each Experience Category

		Enrollment Trend		
		1	2	3
Experience	1	.86	1.03	1.06
	2	.93	1.00	1.08
	3	.88	1.00	1.10
	4	1.00	1.06	.98

B. Ratio of Percentage of Teachers Who Quit by Enrollment Trend to Percentage of Teachers in Sample in Each Enrollment Category

		Enrollment Trend		
		1	2	3
Experience	1	1.60	1.80	2.00
	2	1.23	1.29	1.42
	3	.88	.88	1.00
	4	.77	.79	.74

C. Ratio of Percentage of Teachers Who Transferred by Experience to Percentage of Teachers in Sample in Each Experience Category

		Enrollment Trend		
		1	2	3
Experience	1	.96	.85	1.18
	2	1.15	.91	1.00
	3	1.04	.85	1.10
	4	1.21	.89	1.00

Note: Refer to Tables 2 and 6 for description of coding for experience and enrollment trends, respectively.

patterns. Once tenured, however, the experience of teachers appears to have little influence on quits.

Transfer rates, on the other hand, exhibit very little difference between experience levels. Transfer rates of teachers in the first three categories are no different from the rate expected if based on the percentage of teachers represented in each category (see Table 8). Only the last experience category is significantly different from one and indicates that teachers with greater seniority have either found a school to their liking or are protected from involuntary transfers.

D. Change in Teacher Assignments

Another form of transfer that needs to be considered is the change in assignments. The personnel files of the New York State Department of Education contain a four-digit code which gives detailed information about the teacher's assignment. The code denotes the major subject area taught by a teacher, the grade level, and specific course topic. For example, a teacher with an assignment code of 4313 is assigned to a fourth grade social studies class entitled "American People and Leaders." To determine whether teachers changed assignments between 1972 to 1976, assignment codes in the two years were compared. If they were different, then the teacher was considered to change class assignments. It is possible that teachers change assignments without changing schools. Results show (table not included) that between 1972 and 1976, 47 percent of teachers who transferred changed assignments. Of those teachers who moved to a different school district in New York state, 74 percent changed assignments. Computing the ratio of the percentage of teachers who changed assignments in each experience category to the percentage of total teachers in each category shows no difference between frequency of assignment changes for holdovers, transfers, or quits. At this stage of analysis, therefore, it appears that assignment changes, whether

made voluntarily or at the discretion of the administration, are not made according to experience levels.

IV. Conclusion

The purpose of this paper is twofold. First, it provides a cursory look at the frequency of teacher turnover in districts in New York State during the early 1970s. Second, it explains the method by which transfers and quits were calculated from records obtained from the New York Department of Education.[4] The numbers reveal that certain factors such as declining enrollment and seniority rules may determine the mobility of teachers and consequently the composition of the teaching staff in New York school districts. Furthermore, comparison of the rates of teacher turnover found for New York with rates found in other studies indicates that the behavior of teachers in New York do not differ significantly from the behavior of teachers in other parts of the country. Thus, further analysis of New York state teachers, as provided in subsequent papers, may provide valuable insight into the determinants of teacher mobility.

Footnotes

[1]See Concensus of Governments, 1977.

[2]See New York State United Teachers, Teacher Contract Analysis, 1976-77.

[3]Statistics obtained from analysis of the Sustaining Effects Study, conducted by the System Development Corporation for the Office of Education. See Eberts (1983) for more detail.

[4]The data described in this paper are used in a subsequent paper (Eberts, 1982).

References

William H. Baugh and Joe A. Stone. 1982. "Mobility and Wage Equilibration in the Educator Labor Market." Center for Educational Policy and Management, University of Oregon, Eugene, OR.

S. Carroll, D. Greenberg and J. McCall. "Analysis of the Educational Personnel System: VIII. Overview and Summary." The Rand Corporation, R-1344-HEW.

Randall W. Eberts. 1982. "Determinants of Teacher Turnover in the 1970's: The Case of New York State Public School Teachers." Center for Educational Policy and Management, University of Oregon, Eugene, OR (December).

Randall W. Eberts. 1983. "The Effect of District Personnel Policies on Teacher Mobility." Center for Educational Policy and Management, University of Oregon, Eugene, OR (January).

D. Greenberg and J. McCall. 1973. "Analysis of the Educational Personnel System: I. Teacher Mobility in San Diego." The Rand Corporation, R-1071-HEW (January).

D. Greenberg and J. McCall. 1975. "Analysis of the Educational Personnel System: VII. Teacher Mobility in Michigan." The Rand Corporation, R-1343-HEW.

Emmett B. Keeler. 1973. "Analysis of the Educational Personnel System: IV. Teacher Turnover." The Rand Corporation, R-1325-HEW (October).

F. Lindenfeld. 1963. "Teacher Turnover in Public and Secondary Schools, 1959-1960, Office of Education, Circular No. 675, HEW, Washington.

W. Mason and R. K. Bain. 1959. Teacher Turnover in Public Schools 1957-1958, Office of Education, Circular No. 608, HEW, Washington.

Richard J. Murnane. 1981. "Teacher Mobility Revisited." Journal of Human Resources, Vol. 16, pp. 3-19.

Status of American Public School Teachers, National Education Association, Washington, 1957.

Status of American Public School Teachers, National Education Association Research Division, Washington, 1972.

U. S. Department of Commerce, Census of Governments.

New York State United Teachers, Teacher Contract Analysis, Albany, NY, 1976-77.

Appendix A: Constructing the Data Set

The personnel files of the State of New York contain on average over 130,000 classroom personnel records for the 1972-73, 1976-77, and 1977-78 school years. This large number of teacher records is beneficial since it constitutes a census of all public classroom teachers in the state for each of the three years. The large size, however, makes the analysis extremely difficult and expensive. Consequently, it is necessary to reduce the sample to a more manageable size. Before the subsample was generated, the entire census of teachers for each of the three years had to be merged so that teachers could be located if they changed districts within the state. The matching process created a record for each teacher with information from all three years on each file. Obviously, if a teacher was not hired by a New York State school district until the second or third years or if the teacher left teaching in New York or teaching altogether, some variables will have missing values for certain years. The missing values designate the status of the teacher. This is described more thoroughly in Appendix B.

After the matching process is performed, a one in 20 random sample is created from the file of over 266,000 records, leaving roughly 13,000 teachers in the sample. Since all the relevant information about transfers and quits and districts and schools of origin and destination are already computed, none of the information is lost in the subsample.

Included in each teacher record is the following information for each of the three years:

(a) sex

(b) assignment code

(c) grade level

(d) degree status

(e) educational experience in district

(f) educational experience outside of district

(g) age

(h) percent of time employed (Note: personnel who are not full time are deleted from sample.)

(i) salary.

Appendix B: Calculations of Transfers and Quits

This appendix describes the mechanism of calculating transfers and quits from the master file. It should be noted that transfers and quits were calculated from the master file before the random subsample was created.

To compute transfers and quits, three bits of information are essential: teacher ID number, school ID number, and district ID number.

Transfers

A teacher is considered to transfer schools if the teacher remains in the same district between any of the two time periods but changes schools within the district. For a teacher to be considered a transfer, the following three statements must hold:

(1) school ID in base year is not equal to a missing value;

(2) school ID in base year is not equal to school ID in the subsequent year;

(3) district ID in base year is equal to district ID in the subsequent year.

The first statement assures that a teacher was associated with a school in the base period. This provision is especially pertinent when calculating transfers in the first period. If this were not checked and the teacher did not appear until the third year, say, then missing values in the first two years would be equated by the second statement and a teacher would have been erroneously designated as a transfer. The second statement checks whether or not the teacher is found in the same school in subsequent years. If not, and statement (3) is true, then the teacher transferred. If statement (3) is false, then the group of three statements is false and the teacher is not designated as a transfer.

Quits

A teacher is considered to separate from a school district if a teacher is not found in the same district in subsequent years. In order for a teacher to be considered to separate, the following two statements must hold:

(1) District ID in the base year is not equal to a missing value;

(2) District ID in the base year is not equal to district ID in the subsequent year.

The first statement is necessary to assure that a teacher was employed in a New York State school district in the base year. The second statement is true if the teacher either changed districts or left teaching or left the state. The first option would have a value for the district ID in the subsequent year but different from the first. The latter two options would have a missing value for district ID in the subsequent year which obviously is different from the district ID in the first year since it was determined that the district ID in the base year was not a missing value. Furthermore, if the district ID in the second period is not a missing value but different from the first, then the district of destination of the teacher can be determined. Unfortunately, since some teachers leave the state but remain in teaching it cannot be determined whether or not teachers, when not found in a district in New York, have left teaching. The percentage in this category, however, is probably very small if the patterns in New York follow national patterns (see NEA survey).

Another drawback of the analysis is that it is not possible to determine whether or not teachers transferred or separated voluntarily. As mentioned in the text, some information about the motives to move can be deduced from the estimated determinants of the turnover. This is still, however, a poor proxy for the actual information.